



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,829	05/01/2001	Hardarshan S. Valia	ISP00	4969
27187	7590	08/17/2004	EXAMINER	
BAKER & DANIELS 205 W. JEFFERSON BOULEVARD SUITE 250 SOUTH BEND, IN 46601			BHAT, NINA NMN	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/846,829

Applicant(s)

VALIA ET AL.

Examiner

N. Bhat

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7-5-2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8-22-01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brayton et al.[USP 4,186,054]

Brayton et al. teach a method of producing blast furnace coke by compacting finely divided coal into a compact such that the bulk density is sufficiently increased to be capable of conversion into coke. The compacted coal cake is then carbonized in an oven, which provides coke, which can be used in steelmaking productions. [Note Column 2, lines 15-60]. The compacting means can be in an form suitable for compacting the finely divided coal to achieved the desired coal compact. The preferred method of compacting is by using briquetting rolls, but is not limited to this type of compaction. The coal compact is binderless and after compaction the compact is placed into a coking oven wherein the compacted coal is carbonized into coke, which is

suitable for used in steel and iron making. Brayton'054 teaches that the coal compact has a specific gravity of at least about 1.1.

However, Brayton et al. does not specifically providing a container such that the vertical dimension of the volume of loose coal in the container is smaller than a horizontal dimension the volume of loose coal.

Brayton et al. teach a method for producing blast furnace coke, which includes disposing a volume of loose coal in means, which contains the loose coal, which can be then compacted to produce a coal density, which is greater than that of the loose coal. The compacted coal is then subsequently charged into a coking oven, which is then subjected to carbonization to provide coke. Brayton et al.'054 specifically teach compacting loose coal in a container to produce a compacted coal, which has a density, which is greater than that of the loose coal. The compacted coal has a substantially uniform density and has a specific gravity of 1.1, which is at least about 1.05 as, claimed by applicant. Although Brayton et al. does not provide a container wherein the vertical dimension of volume is smaller than the horizontal dimension of the container, Brayton et al. does suggestion that the compaction means is not critical and can include any means for compacting the coal, which would include a container having the specific dimensions as claimed by applicant. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a compaction container as claimed where there is a specific suggestion in the art to provide means for compaction which provide a compacted coal having a density which is greater than that of the loose coal. The reason for compacting, i.e., to product a uniform density coal compact which

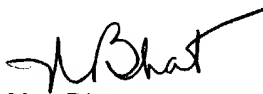
Art Unit: 1764

is then introduced into a coke oven taught by Brayton et al. is the same reason as claimed by applicant, the means to effect compaction by any means has been discussed and suggested by Brayton et al. thus to provide compaction container or container for containing the loose coal so that it may be compressed or compacted to provide a compacted coal product having a density which is greater than that of the loose coal renders applicant's invention as a whole obvious to one having ordinary skill in the art at the time the invention was made.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sturgulewski teach a coal bed vibration compactor for non-recovery coke oven. Ford teaches reclaiming and utilizing discarded and newly formed coke breeze, coal fines, and blast furnace revert materials and related methods. Weber et al. teach a method for pouncing blast furnace coke. Wienert teach a process for making strong metallurgical coke. Wolfe et al. teach a method an apparatus for converting coal into liquid fuel and metallurgical coke. Nire et al. teach a method of making coke for blast furnaces without causing the fusion of coke. Wienert'951 teach a piece of coke of high density and strength are made from fine particles. Gross et al. teach a method and device for producing a coke coal caoke for carrying out a coking process into a furnace chamber. Barkdoll teach compaction of loose coal which is then introduced into a coke oven wherein the compaction takes place via a vibrating screen.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
N. Bhat  
Primary Examiner  
Art Unit 1764